63-3-5

TM-(L)-734/020/00

405788

TECHNICAL MEMORANDUM

(TM Series)

DDC AVAILABILITY NOTICE

Qualified requesters may obtain copies of this report from DDC.

This document was produced by SDC in performance of contract AF 19(628)-1648, Space Systems Division Program, for Space Systems Division, AFSC.

1604 Simulation Program Descriptions
Milestone 11

Octal Dump for Simulation Augmentation Messages (SOCT)

by

J. D. Solomon

15 March 1963

Approved

J. B. Munson

SYSTEM DEVELOPMENT CORPORATION
2500 COLORADO AV
SANTA MONICA
CALIFORNIA

TABLE OF CONTENTS

1.0 SUBROUTINE IDENTIFICATION

1.1 Title

SOCT - Ident: K22, Mod. 01

1.2 Programmed

January 1963, J. D. Solomon, System Development Corporation

1.3 Documented

February 1963, J. D. Solomon, System Development Corporation

2.0 PURPOSE

This routine is used to output messages which have been previously generated and recorded on magnetic tape by the SIPSA* system, or recorded by the SIMSTN* program.

3.0 USAGE

3.1 Calling Sequence

L	RTJ		SOCT
	A		B
L+1	C		D
	ZRØ		
L+2	01	CN	TN
	00	UN	0
L+3	NORMAL RETURN		

*A description of SIPSA and SIMSTN is contained in the reference listed in Section 9.1.

where:

A = Relative position of the first 160-A word

B = Start address of data

If C = 13, the output is on Tape Unit 3 and on the 1612 printer

If C = 0, the output is on Tape Unit specified in L+2

D = Data blocklength

CN = Tape channel number

TN = Logical tape unit

UN = 1607 cabinet number

3.2 Tape Assignments

A COPII augmentation master tape is used on logical Tape Unit 1. A blank tape is used on the unit specified in L+2 of the calling sequence.

3.3 Output Data Format

The data format for on-line and off-line output is presented in Appendix B.

4.0 METHOD

SOCT is entered from the control program, DROPSA, and initializations are performed. The data block specified in the calling sequence is extracted, separated into 160-A format (12 bits per word), and stored in an output buffer. The message is then output on-line and/or on tape, and control is returned to DROPSA. (A data flow is presented in Appendix A, and the output format is presented in Appendix B.)

5.0 RESTRICTIONS

5.1 Hardware Requirement

A 1604 computer, two tape units on a 1607 cabinet, and a 1612 printer are required.

5.2 Required Subroutines

The control program, DROPSA, and the subroutines OUTPUT, OUTERR, and OCTBCD are required.

5.3 Index Register Requirements

Index registers 1-6 are used. The contents of index register 6 are not saved.

6.0 TIMING

The time required to dump a 6 word message is 100 m.s.

7.0 STORAGE REQUIREMENTS

Program	153_8 Cells
Temporary and Constants	50_8 Cells
Total	223_8 Cells

8.0 VALIDATION TEST

8.1 Test Inputs

8.1.2 Binary Tape

A binary tape, containing augmentation messages, was generated by the SIPSA System*.

8.1.3 Control Deck

The structure of the card deck used in the test is presented in Appendix C.

8.2 Procedure

A COPII augmentation master tape was mounted on logical Tape Unit 1.

The input tape was mounted on logical Tape Unit 2.

The card deck shown in Appendix C was read into the 533 reader and the test was executed.

Data was output on logical Tape Unit 3 and the test was terminated.

8.3 Test Outputs

A partial listing of the output tape is presented in Appendix B.

The data on the input tape and output tape was compared and found to be identical.

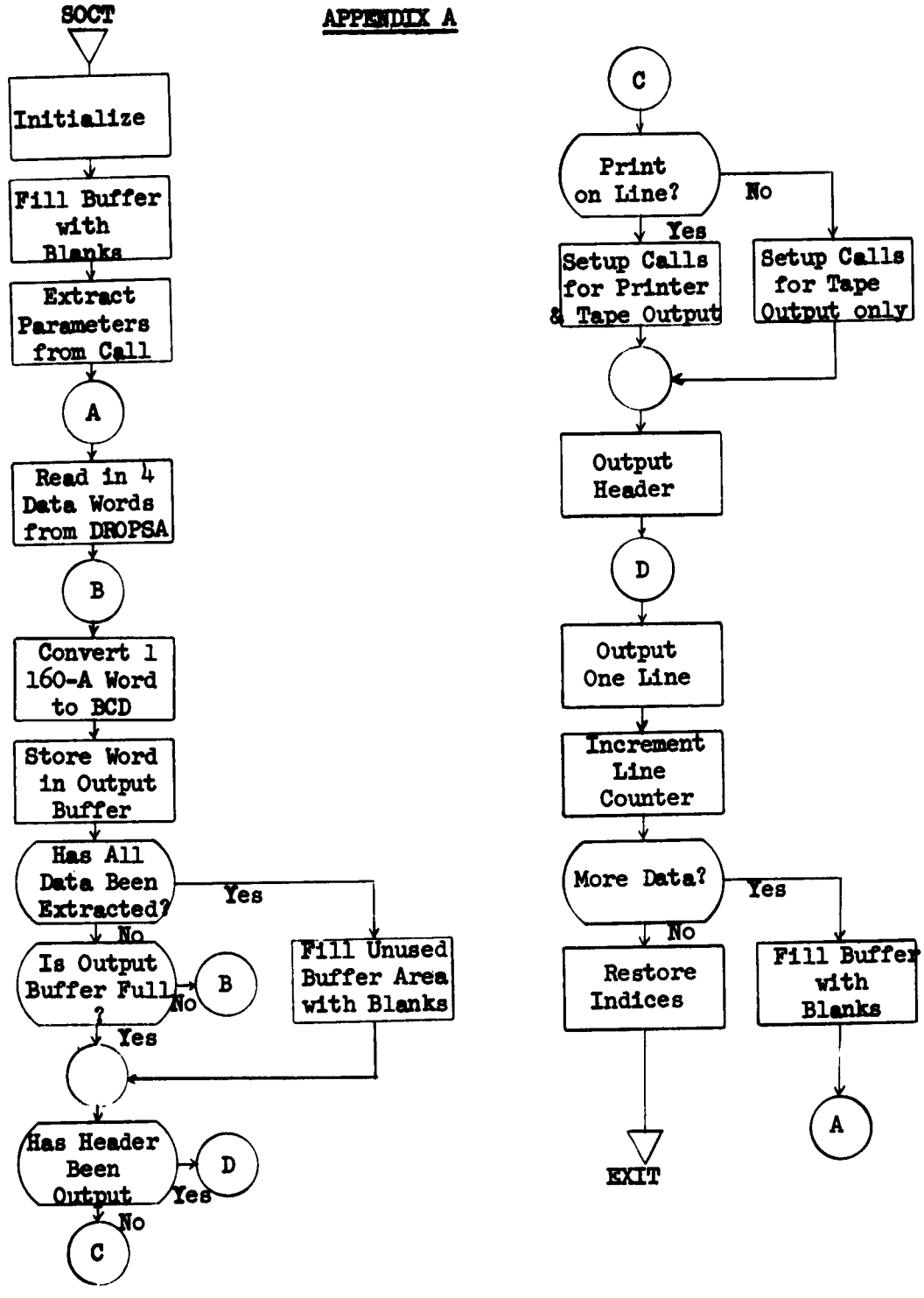
9.0 REFERENCES

9.1 TM-(L)-734/015/00, Computer Program Design Specifications for the Simulation of the Augmented SCF Environment at the STA and CPDC, System Development Corporation, 21 November 1962.

9.2 TM-(L)-734/017/00, Data Reduction and Output Preparation System for Augmentation (DROPSA), System Development Corporation, 15 March 1963.

9.3 CPL Catalogue No. 75922.

APPENDIX A


SOCT
Initialize
Fill Buffer with Blanks
Extract Parameters from Call
A
Read in 4 Data Words from DROPSA
B
Convert 1 160-A Word to BCD
Store Word in Output Buffer
Has All Data Been Extracted?
Yes
No
Is Output Buffer Full ?
No
B
Yes
Fill Unused Buffer Area with Blanks
Has Header Been Output
D
Yes
No
C
C
Print on Line?
No
Yes
Setup Calls for Printer & Tape Output
Setup Calls for Tape Output only
Output Header
D
Output One Line
Increment Line Counter
More Data?
Yes
No
Restore Indices
Fill Buffer with Blanks
A
EXIT

APPENDIX B

OCTAL DUMP OF MESSAGE CONTAINING 6 WORDS

1.	2.	3.	4.	5.	6.
7777	0113	0012	4000	0000	3652

OCTAL DUMP OF MESSAGE CONTAINING 4 WORDS

1.	2.	3.	4.
7777	0405	0503	6667

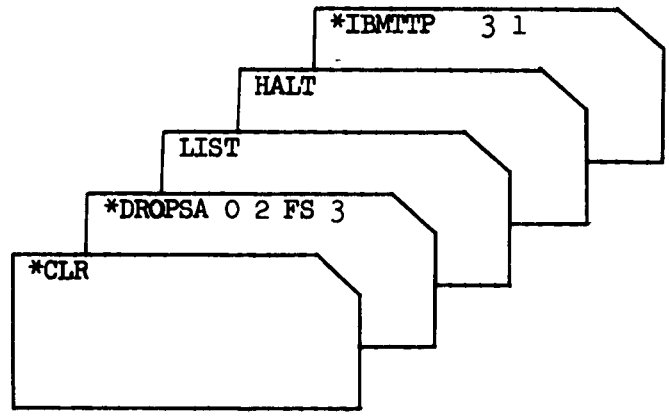
OCTAL DUMP OF MESSAGE CONTAINING 6 WORDS

1.	2.	3.	4.	5.	6.
7777	0113	0012	4000	0001	3651

OCTAL DUMP OF MESSAGE CONTAINING 4 WORDS

1.	2.	3.	4.
7777	0405	0503	6667

APPENDIX C



CONTROL DECK

DISTRIBUTION
(EXTERNAL)

Space Systems Division
(Contracting Agency)

Maj. C. R. Bond (SSOCD)
Maj. N. D. LaVally (SSOX)

6594th Aerospace Test Wing
(Contracting Agency)

Lt. Col. A. W. Dill (TWRD) (10)
Lt. Col. M. S. McDowell (TWRU)
TWACS (20)

PIR-E1 (Lockheed)

J. A. Boysen
N. N. Epstein
W. E. Moorman
G. F. Taylor
R. L. Vader
P. E. Williams

PIR-E2 (Philco)

J. A. Bean
J. A. Isaacs
R. Morrison
S. M. Stanley

PIR-E3 (LFE)

D. F. Criley
K. B. Williams

PIR-E4 (GE-Santa Clara)

D. Alexander

PIR-E4 (GE-Sunnyvale)

J. Farrentine
N. Kirby

PIR-E4 (GE-Box 8555)

J. S. Brainard
R J. Katucki
J. D. Selby

PIR-E4 (GE-3198 Chestnut)

J. F. Butler
C. A. Cummings
H. D. Gilman

PIR-E4 (GE-Bethesda)

W. L. Massey

PIR-E4 (GE-Box 8661)

F. T. Clark
J. D. Rogers
W. R. Weinrich

PIR-E5 (Aerospace)

A. Bakst
J. W. Bengston
R. V. Bigelow
R. O. Brandsberg
L. H. Garcia
G. J. Hansen
M. L. Luther
T. R. Parkin
E. E. Retzlaff
R. G. Stephenson
D. D. Stevenson
V. White

PIR-E8 (Mellonics)

F. Druding (3)

NAME		ROOM
D. Reilly		24121
A. Robinson		24132
M. Rockwell		24086
J. Schroeder		24124
R. Scott		24110
C. Seacat		Sunnyvale
H. Seiden		22126
R. Shapiro		24110
S. Shoel		23007
R. Skelton		22152
N. Speer		24086
E. Stone		24058
M. Sweeney		25026
W. Taber		22101
T. Tennant		27029
J. Thompson		24088
C. Toche		24121
R. Totschek		24120
A. Tucker		22109
A. Vorhaus		24076
M. Weinstock		22131
S. Weems		22109
G. West		Sunnyvale
G. P. West		22116
H. Williams		22110
G. Wilson		24124
M. Winsor		22156
J. Winter		24117
R. Wise		22085
J. Wong		Sunnyvale
C. Zubris		24075
AFCPL	(5)	14059

15 March 1963

TM-(L)-734/020/00

DISTRIBUTION
(INTERNAL)

NAME	ROOM
D. Allfree	24083
J. Aldana	22131
L. Alexander	22134
N. Alperin	22153
E. Armstrong	24123
C. Becerra	24082
D. Biggar	24118
R. Bilek	23007
L. Brenton	24103
B. Burke	24086
R. Burke	22158
R. Busch	22088
C. Bustya	22134
M. Champaign	22152
C. Chiodini	24091
B. Ciaccia	24082
R. Clements	22109
B. Cline	24127
J. Cogley	22156
L. Conger	24088
P. Cooley	24086
D. Crum	24105
L. DeCuir	24053
W. Derango	24082
G. Dexter	25016
R. Disse	23014
G. Dobbs	22116
W. Dobrusky	24065
R. Dugas	22125
R. Ellis	22131
R. Ericksen	22113
H. Feldstein	24128
C. Francis	25013
H. Franks	24122
R. Frey	22078
L. Friedman	22122
S. Gardner	25026
V. Gergen	25014
I. Greenwald	22094
J. Haake	22153
D. Henley	22094
C. Hill	22101
J. Hillhouse	22078
H. Holzman	24065
G. Hudson	24126
R. Johnson	22125
P. Kastama	22076
M. Katz	25014
F. Kayser	24109
J. Keddy	24105
D. Key	23013
R. Keyes	24073
J. Kneemeyer	22088
R. Knight	22119
L. Kolbo	22155
J. Laughlin	24073
J. LaVine	24093
H. Lewis	23010
J. Little	24088
F. Long	22156
J. Lytton	24077
G. Madrid	22081
G. Mahon	24089
J. Marioni	24076
R. Marshall	22160
W. Martin	24127
J. McKeown	23013
J. Milanese	22155
J. Munson	22087
G. Myers	22095
P. Nelson	24075
J. Ng	22077
L. Ngou	24127
M. Olson	22161
L. Padgett	24110
E. Patin	Sunnyvale
D. Persico	24083
T. Polk	24113

UNCLASSIFIED

System Development Corporation,
Santa Monica, California
1604 SIMULATION PROGRAM DESCRIPTIONS
MILESTONE 11 OCTAL-DUMP FOR SIMULATION
AUGMENTATION MESSAGES (SOCT).
Scientific rept., TM(L)-734/020/00,
by J. D. Solomon. 15 March 1963, 7p.
3 refs.
(Contract AF 19(628)-1648, Space Systems
Division Program, for Space Systems
Division, AFSC)

Unclassified report

DESCRIPTORS: Programming (Computers).
Satellite Networks. UNCLASSIFIED

Reports that SOCT (Octal Dump for Simulation Augmentation Messages) is used to output messages which have been previously generated and recorded on magnetic tape by the SIPSA (Simulated Input Preparation System for Augmentation) system, or recorded by SIMSTN (Augmented Tracking Station Simulation Program). UNCLASSIFIED UNCLASSIFIED